Remarks

Claims 1 through 4, 6 through 14, 16 through 24, 26 through 34, and 36 through 41 remain pending in the application.

The prior amendments, submitted November 29, 2010, have not been entered, and the amendments presented above are based on the claims as they were presented in the Response submitted July 2, 2010.

In the Advisory Office Action, the Examiner notes that applicant's amendments to claims 21, 31 and 41 should characterize the distal and proximal ends of the segment of the coronary blood vessel, and not the coronary blood vessel itself. The claims are amended accordingly.

The Final Office Action of September 28, 2010 rejected claims 21, 23, 31 and 33 as anticipated by Stevens, et al., Method for delivery of Therapeutic Agents to the Heart, U.S. Patent 6,152,141 (Nov. 28, 2000). Claims 21 and 31 have been amended, to clarify that the term distal is used, as it is naturally used by those in the art, in reference to the proximal and distal ends of the coronary blood vessel, more specifically to the segment recited in those claims. The amendment is supported by the passage in the specification at page 20, ll. 16-19, and Figure 5 and its accompanying text. Stevens shows injection of agents at a site proximal, relative to the blood vessel itself, to the diseased segment of the blood vessel. Thus, Stevens does not anticipate claims 21, 23, 31 and 33.

The Office Action rejects method claims 26 through 28, 30, 36-38 and 40 as obvious over Stevens in view of Sahatjian, Stent

Lining, U.S. Patent 5,843,089 (Dec. 1, 1998). The Office Action also rejects claims 24 and 34 as obvious over Stevens. These claims should be allowable as dependent on otherwise allowable base claims.

The Office Action rejects claims 1 through 4, 6 through 8, 11 through 14, 16 through 18, 21 through 24, 26 through 28, 31 through 34, and 36 through 38 as obvious over Nash, Systems And Methods For Delivering Agents Into Targeted Tissue Of A Living Being, U.S. Patent 6,709,427 (Mar. 23, 2004) (filed Aug. 5, 1999) in view of Stegmann, Induction Of Neoangiogenesis In Ischemic Myocardium, U.S. Pub. 2002/0122792 (filed July 22, 1999). The independent claims 1, 11, 21 and 31 have been amended to clarify that the term distal is used, as it is naturally used by those in the art, in reference to the proximal and distal ends of the coronary blood vessel. The amendment is supported by the passage in the specification at page 20, ll. 16-19, and Figure 5 and its accompanying text. Neither Nash nor Stegmann suggest this location for injection, and, since the claimed injection site is downstream in the blood flow, artisans would have expected that agents injected downstream from the treatment site to be washed further downstream, and thus wasted. The downstream delivery pathway upon which the claimed method depends was unappreciated in the art at the time of invention, and later described by the inventor, Peter Altman, in Altman, et al., Exploring Heart Lymphatics in Local Drug Delivery, 1 Lymphatic Research And Biology 47, (2003). (This article was discussed previously, in the amendment dated March 26, 2009.) Accordingly, claims 1 through 4, 6 through 8, 11 through 14, 16 through 18, 21 through 24, 26 through 28, 31 through 34, and 36 through 38 are not obvious.

The Office Action rejects claims 9, 10, 19, 20, 29, 30, 39 and 40 as obvious over Nash and Stegmann further in view of Levine, et al., Targeted Angiogenesis, U.S. Pub US 2002/0019350 (Feb. 14, 2002). These claims should be allowable as dependent on otherwise allowable base claims.

The Office Action rejects claim 41 as obvious over Stevens in view of Kunz, et al., Therapeutic Inhibitor Of Vascular Smooth Muscle Cells, U.S. Patent 5,981,568 (Nov. 9, 1999). This claim is amended to clarify that the term distal is used, as it is naturally used by those in the art, in reference to the proximal and distal ends of the coronary blood vessel, more specifically to the segment recited in those claims. Neither Stevens nor Kunz suggest this location for injection, and, since the claimed injection site is downstream in the blood flow, artisans would have expected that agents injected downstream from the treatment site to be washed further downstream, and thus wasted. Thus, claim 41 is not obvious.

Conclusion

This response has addressed all of the Examiner's grounds for rejection. The rejections based on prior art have been traversed. Reconsideration of the rejections and allowance of the claims is requested.

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